UTAH STATE IMPLEMENTATION PLAN

SECTION X

VEHICLE INSPECTION AND MAINTENANCE PROGRAM

PART D

UTAH COUNTY

Adopted by the Utah Air Quality Board
August 1, 2001

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UTAH STATE IMPLEMENTATION PLAN
SECTION X
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1. I/M performance standard

Technical Support Documentation (TSD) Tab1: MOBILE5.a input-output files, Basic and Enhanced; description of Basic I/M program improvements

Federal requirements EPA's I/M regulation, 40 CFR Part 51, Inspection and Maintenance Program Requirements last amended at 66 FR 18156, April 5, 2001, specifies a model Basic I/M program. Utah is required by Section 182 of the Clean Air Act to implement an I/M program in Utah County that is at least as effective as the EPA's Basic Performance Standard. The Basic I/M performance standard is specified in 40 CFR 51.352. While local governments have flexibility to implement programs best suited for their area, EPA's regulations require a performance demonstration that local I/M programs result in automotive emissions equal to or less than predicted for the EPA model I/M program. State and local governments may choose options best suited for their area to meet the performance standard.

I/M Program MOBILE modeling The performance standard demonstration is made by use of the most recent release of EPA's MOBILE model. The MOBILE5.a model is able to calculate emission factors, grams of a particular pollutant per vehicle mile traveled across the fleet in an area (G/VMT), given information about the fleet, climate, fuel characteristics and I/M programs in a local area. Version MOBILE5.a was used for the Basic I/M performance standard demonstration analysis. The MOBILE5.a input and output files for the modeling performed to evaluate the emission reduction benefits for Utah County's Basic I/M program are found in the Utah County I/M Program Technical Support Document (TSD). Table X.D.1 summarizes the attainment milestones, the applicable performance standard and program target emission factors for VOC and CO emission factors specified in 40 CFR 51.

UTAH COUNTY I/M PERFORMANCE STANDARDS ANALYSIS SUMMARY

pollutant	program modeled evaluated at 32 degrees F at 35 mph	emission factors in grams/mile				
		January 1 1996	1997	2000	2003
VOC	Basic Performance Standard		2.70	2.47	2.30
	Basic Program Target		2.65	2.42	2.22
CO	Basic Performance Standard	22.85		18.69	
	Basic Program Target	21.89		17.83	
	Enhanced Performance Standard	20.50		13.70	
	Enhanced Program Target	21.30		12.70	

TABLE X.D.1

I/M Program Performance Standard Utah County's I/M program exceeds the Basic I/M performance standard for all pollutants, although the EPA only requires the demonstration for each pollutant which caused an area to be subject to an I/M program. Utah County is a moderate carbon monoxide (CO) National Ambient Air Quality Standard (NAAQS) non-attainment area.

I/M Program Improvements On December 18, 1995, the Utah County Commission adopted Ordinance No. 1995-29, which adopted the Diesel Vehicle Emissions Inspection/Maintenance Program Rules and Regulations and the Vehicle Emissions Inspection/Maintenance Program Rules and Regulations in book form. Ordinance 1999-28 was adopted by the Utah County Commission on December 29, 1999 and modified on October 31, 2000 to accommodate a new analyzer and data network that are Year 2000 (Y2K) and On-Board Diagnostics (OBD) compliant. These regulations require individuals whose primary residence in Utah County to register their motor vehicles in Utah County, removes the exemption for diesel vehicles older than model year 1968 (except for vintage vehicles), establishes waiver cut points, allows the county to recall specific vehicles for quality assurance testing, and allows the county to require repair of vehicles following the additional testing. Provo City ordinance requires that the vehicles operated by people staying in Provo for more than sixty days be inspected and repaired as specified in the Utah County I/M ordinance regardless of where the vehicle is registered. These ordinances are provided in Section X, Part D, Appendix D.1.

Enhanced I/M Program requirement The Utah County Commission resolution committing to implement emission reduction programs that will achieve the reductions that are necessary to attain the standard by December 31, 1995, as required by the SIP, is in Section X, part D, Appendix 3. On January 25, 1995, the Utah County Commissioners adopted Ordinance No. 1995-02, which adopts the Enhanced and Basic Vehicle Emission Inspection and Maintenance Program Rules and Regulations and specifies they shall be in effect and enforced only if the County Commission is unable to implement alternative

emission reduction strategies that result in the required emission reduction credits as provided for in the State Implementation Plan for Carbon Monoxide for Utah County.

I/M Program Improvements MOBILE modeling The performance standard demonstration is made by use EPA's MOBILE model. The MOBILE model is able to calculate emission factors, grams of a particular pollutant per vehicle mile traveled across the fleet in an area (G/VMT), given information about the fleet, climate, fuel characteristics, and I/M programs in a local area. Version MOBILE5.a was used for the performance standard demonstration analysis. Table X.D.1 summarizes the attainment milestones, the applicable performance standard and program target emission factors for CO.

Improved I/M Program Performance Standard Utah County's Improved I/M program exceeds the federal Basic I/M performance standard for all pollutants, although the EPA only requires the demonstration for each pollutant which caused an area to be subject to an I/M program. Utah County has incorporated Basic I/M improvements to demonstrate compliance with the Enhanced I/M performance standard for carbon monoxide. The performance demonstration summary and Mobile 5.a input and output files for the performance demonstration analysis for the Enhanced I/M program for Utah County will be added after the county adopts specific Enhanced I/M requirements.

2. Network type

TSD Tab 2: Letters of opinion from the Utah Attorney General and the Utah County Attorney

Utah County's I/M program is a basic, decentralized, test-and-repair network. Beginning July 1, 1995, Utah County's network was required to be Enhanced and test-only unless a test-and-repair network was approved by EPA as being equivalent to a test-only network regarding emission reduction effectiveness. Letters of opinion from the Utah Attorney General's Office and the Utah County Attorney's office validating the authority to implement the specified network in Utah County are provided in the TSD.

During 1995, Utah County submitted a state implementation plan (SIP) for an enhanced I/M program following the provisions of Section 348 of the National Highway System Designation Act of 1995 (NHSDA). The NHSDA allowed I/M programs to bypass the 50% credit reduction that is normally given to a decentralized I/M program. The Act allowed areas to use good engineering judgement to determine the benefits of a specific program design. Accordingly, Utah County re-evaluated the emission reductions for an enhanced decentralized I/M program. Utah County demonstrated its decentralized I/M program with enhancements would provide equal or greater emission reductions than a centralized test-only program.

Utah County had previously conducted an extensive evaluation of the emission reduction credits for a decentralized I/M program. In an effort known as the Utah Protocol, EPA ran

a detailed analysis of the Utah data in comparison to the Minnesota data concluding that the Utah programs were equivalent to a centralized program. This analysis alone was not sufficient to meet the requirements of the NHSDA. In order to meet the requirements of the Act, Utah County performed additional testing and analysis following a methodology developed by the Environmental Council of the States (ECOS), State and Territorial Air Pollution Program Administrators (STAPPA) and EPA I/M Workgroup in response to the NHSDA. The proposed evaluation procedure allowed states considerable flexibility in determination of the specific data and analysis techniques to be used to quantify I/M program effectiveness.

Utah County's NHSDA analysis was submitted to EPA on May 27, 1999. EPA responded in a letter dated July 26, 1999, that Utah County had provided an adequate qualitative analysis and that EPA intended to convert the interim approval of Utah County's I/M Program to a proposed full approval. Final approval is anticipated through a rulemaking action executed via a federal register notice.

3. Tools and resources

TSD Tab 3: Budgets, description of resources

Funding mechanisms Utah County's I/M program is funded through several mechanisms including a $1 air pollution control fee for each non-diesel-fueled vehicle registered in the county. I/M Certificates are sold to I/M test stations for $2.25 each. The county also charges fees for various permitting activities. The fees are dedicated to the I/M program. A fee schedule can be found in an Appendix to the Utah County's I/M Program ordinance.

I/M program funding requirements Utah County will allocate funding as needed to comply with the relevant requirements specified in Utah's SIP; Utah statutes; county ordinances, regulations and policies; and the federal I/M program regulation. Budgets and descriptions of personnel resources, facilities, and equipment for Utah County's I/M program are included in the TSD.

4. Test convenience

There are approximately 140 permitted Basic I/M stations within Utah County. Specific operating hours are not specified by the county. Some stations that test and/or service only one type of vehicle are permitted. There are also government and private fleet permitted stations that are not open to the public.

5. Vehicle Coverage

TSD Tab 4: sample letter to owners. (Farm truck exemption form and Tax Commission form are found with SIP Section X.A)

Subject fleet All model year 1968 and newer model year light duty vehicles, light duty trucks, and heavy duty trucks registered or principally-operated in Utah County are subject to the I/M programs except for exempt vehicles as specified in Section 6.6 of the Utah County I/M Ordinance.

Alternative fuels Vehicles operated on alternative fuels such as propane, alcohol, and natural gas are also subject to the program. Dual-fueled vehicles are tested twice, once on each fuel.

Government fleet Section 41-6-163.6(1)(b) of the Utah Code requires that all vehicles owned or operated in the county by federal, state, or local government entities comply with the I/M programs.

Vehicles owned by students and federal employees Section 41-6-163.3(5) of the Utah Code requires universities and colleges located in Utah's I/M areas to require proof of compliance with the I/M program for vehicles which are permitted to park on campus regardless of where the vehicle is registered. Vehicles operated by federal employees and operated on a federal installation located within an I/M program area are also subject to the I/M program regardless of where they are registered. Proof of compliance consists of a current vehicle registration in an I/M program area or an I/M certificate of compliance or waiver, or evidence of exempt vehicle status as specified in this section.

Farm truck exemption Eligibility for the farm truck exemption from the I/M programs is specified in Section 41-6-163.6(4) of the Utah Code and must be verified in writing. The owner must sign an affidavit on Utah State Tax Commission form TC-838 that vehicle use will be limited to agricultural activities.

Diesel vehicles A light and heavy duty diesel I/M program was implemented in 1994 and is defined in SIP Section XXI.

New vehicle exemption Proof that a vehicle is new and being registered for the first time is established by presentation of a Manufacturer's Statement of Origin (MSO) at the time of registration.

Out-of-state exemption Vehicles registered in an I/M county but operated out-of-state are eligible for an extension. The owner must complete Utah State Tax Commission form TC-810 in order to be registered without inspection documentation from Utah County. The owner must explain why the vehicle is unavailable for inspection in Utah. Common situations include Utah citizens that are military personnel stationed outside of the state, students attending institutions of higher education elsewhere, and people serving missions. If the temporary address of the owner is located within another I/M program area listed on the back of the form, the owner must submit proof of compliance with that I/M program at the time of, and as a condition precedent to, registration or renewal of registration. The vehicle owner must identify their anticipated date of return to the state

and is required to have the vehicle inspected within 10 days after the vehicle is back in Utah, unless they can demonstrate that the vehicle had passed an I/M inspection in another area. Utah County maintains a record of such exemptions and requires submission of an I/M inspection certificate or waiver at the indicated time.

Exempt vehicle The following vehicles are exempt from inspection: motorcycles, electric powered vehicles, new vehicles registered for the first time, model year 1968 and older vehicles, farm vehicles and equipment, construction equipment, and other off-road vehicles.

Unregistered vehicles I/M ordinances and regulations require that vehicles available for rent or use in Utah County are subject to its I/M program. To the extent practicable, all vehicles principally-operated within the county are subject to the I/M program.

6. Test procedures and standards

TSD Tab 5: UTAH2000 analyzer specification

Specifications Detailed specifications for the I/M test procedures and standards are described in the Utah County I/M ordinance provided in Section X, Part D, Appendix D.1. Specifications for the test procedure and equipment were developed according to good engineering practices to ensure test accuracy.

Test procedure and analyzer The Basic I/M program is compatible with EPA's PRECONDITIONED TWO SPEED IDLE TEST as specified in EPA-AA-TSS-I/M-90-3 March 1990, Technical Report, "Recommended I/M Short Test Procedures for the 1990's: Six Alternatives." 1996 and newer vehicles are tested using OBD II test procedures. All Basic emissions inspections are performed using the UTAH2000 Analyzer, a BAR97-type emissions analyzer. The UTAH2000 Analyzer calibration specifications and emissions test procedures meet the minimum standards established in Appendix A of the EPA's I/M Guidance Program Requirements, 40 CFR Part 51 Subpart S.

Covered vehicles are defined in Section 5 above. All covered vehicles in Utah County are subject to the Basic test procedure and inspected using the UTAH2000 analyzer as specified in this section.

Pre-inspection emissions-related repairs Inspectors in the county's test-and-repair networks are required to perform the emissions test prior to making any emissions-related repairs when a vehicle is presented for an emissions inspection. All inspectors who conduct test-only inspections, are required to ask the vehicle owner or operator whether a tune-up or other emissions-related repairs have been performed within 6 weeks prior to the emissions inspection and to document the owner's response in the UTAH2000 computer database.

Safety issues Vehicles presented in unsafe condition must be repaired before inspection. Vehicles are also subject to an annual safety inspection administered by the Highway Patrol. Submission of proof of compliance with the safety program is also required as a condition for registration or renewal of registration. Most owners in Utah's test-and-repair networks have the safety and emissions inspection performed at the same time as the emissions inspection. Data relative to the safety inspection can be recorded in the UTAH2000 Analyzer. Utah County's I/M program is administered with close cooperation with the Utah Highway Patrol Safety Program.

Exhaust leaks The UTAH2000 analyzer measures exhaust carbon monoxide (CO) and carbon dioxide (CO_2). Exhaust CO + CO_2 readings of less than 6% indicate a leaky exhaust system and cause the UTAH2000 analyzer to abort the inspection.

Emission standards The Utah County proposed I/M ordinance includes hydrocarbon and carbon monoxide emission standards in an appendix to allow for quick adjustment of the standards in case actual failure rates fall below the level specified in the State Implementation Plan. Vehicles must pass both the hydrocarbon and carbon monoxide emission standard regardless of the NAAQS attainment status of the county of registration. The emission standard for the Basic I/M program was used in the MOBILE5.a modeling that was conducted to demonstrate compliance with the Basic I/M performance standard. Utah County also established waiver emission standard for carbon monoxide that can be found in Appendix F of Utah County's Vehicle Emission Inspection Maintenance Program ordinance.

Stringency The Utah County I/M program will adjust tailpipe emission standards as necessary to maintain a stringency rate of at least 22% for pre-81 model year vehicles, the stringency rate used in the Basic I/M performance standard modeling demonstration.

Re-test standards The same test procedure and emission standards are used for initial tests and retests, regardless of which part a vehicle may have failed during an initial test. Utah County's I/M test procedure requires an official test, once initiated, to be performed in its entirety regardless of intermediate outcomes, except in the case of invalid test conditions, unsafe conditions, or the fast pass/fail algorithms.

*Anti-tampering provision*s Regardless of the vehicle model year, Utah County does not allow waivers for tampered vehicles or money spent to repair tampered or missing emission control devices to be applied towards a minimum waiver cost. Utah County requires repair of any catalyst and air pump system tampering on vehicles of model year 1977 through 1989. The county also requires repair of any tampering of the air system, catalyst, exhaust gas recirculation (EGR) valve, evaporative system, positive pressure crankcase valve (PCV), and gas cap on model year 1990 and newer vehicles.

Engine changes Utah County's proposed I/M ordinance has a section that addresses engine changes performed prior to 1991. After an engine change, vehicles are tested to

the tailpipe emission standards and anti-tampering requirements applicable to vehicles of the engine model year. Mixing vehicle classes (e.g., light-duty with heavy-duty) and certification types (e.g. California with federal) within a single vehicle is considered tampering.

Fuel switching Vehicles that are switched to a fuel type for which there is no certified configuration are tested according to the most stringent emission standards for that vehicle model year and vehicle type.

7. Test Equipment

TSD Tab 5: Utah2000 analyzer specification; certification procedure

Specifications The UTAH2000 Analyzer is a BAR97-type computerized emissions analyzer. Additional written technical specifications for Utah County's I/M test equipment are specified in Utah County's I/M ordinance.

Analyzer access restrictions An inspector access code is required to use the UTAH2000 analyzer for official tests, a service access code to repair or service the analyzer, and an auditor access code to access the audit functions. DOS functions are not accessible to station owners or inspectors. Programming changes are made by county I/M auditors from disks supplied by the analyzer manufacturer.

Data security provisions Manual data entry is minimized. For initial inspections, the inspector enters vehicle registration and vehicle information from the keyboard. Data elements are described in the UTAH2000 analyzer specifications. For retests, the inspector calls up the initial test file, compares the vehicle and owner data, and confirms the VIN/license plate data. Data regarding inspections, analyzer calibration and service, lock-out activities, and audit information are downloaded to the county vehicle identification database daily; data from each analyzer is downloaded once or twice weekly.

Automated test procedure The UTAH2000 analyzer automatically reads all test measurements, records test results in the computer database, determines whether the vehicle has passed or failed a test, and prints vehicle inspection reports and inspection certificates for all subject vehicles. The analyzers are capable of simultaneously sampling dual exhaust vehicles. The analyzer bench includes two non-dispersive infrared (NDIR) analyzers for carbon monoxide, carbon dioxide, and hydrocarbon measurements (one low range and one high range), and one NDIR analyzer for carbon dioxide measurement. The test procedure is automated to the highest degree practical to minimize the potential for intentional fraud and/or human error.

Security lockouts The analyzers are programmed to trigger lock-outs when abuse or tampering occur. Lock-outs occur after any security system is tampered, failure to

conduct or pass periodic calibration tests, or the data recording medium is full. The analyzer can not be used until the lock-out has been cleared by a Utah County I/M auditor. The analyzer automatically keeps an electronic record of all lock-outs including the date of the lock-out, the reason for the lock-out, and the date and person that cleared the lock-out.

Certified analyzer use restriction Since March 1, 2000, the Utah County Basic I/M program requires that official emissions tests be conducted only on registered UTAH2000 analyzers jointly certified by Utah, Davis and Weber Counties. A description of the certification procedure is provided in the TSD. There have been several updates of the UTAH2000 Analyzer specifications to date and more will follow, as necessary, to accommodate new technology vehicles and changes to the program.

8. Quality Control

General quality control specifications Utah County's I/M Program, the UTAH2000 Analyzer specifications, and current I/M program ordinances and regulations were carefully designed to insure that emission measurement equipment is calibrated and maintained properly, and that inspection, calibration records, and maintenance records are accurately created, recorded, and maintained. The specifications meet the test equipment quality assurance practices described in 40 CFR 51 Subpart S Sec. 51.359 and Section X, Appendix A.

Automatic electronic quality assurance features Operational analyzer quality assurance measures such as analyzer calibration, zero and span check, hydrocarbon hang-up check, and leak check are mandatory automatic analyzer capabilities. Gas accuracy tolerances, dilution limits, analyzer warm up requirements, system response time requirements, optical correction factors, and interference effects are also addressed in the analyzer specifications. If the checks are not performed on schedule or identify measurements outside of acceptable limits established in the specifications, a lock-out occurs preventing use of the analyzer until such problems are corrected. See Sections 2.12, 2.13, and 2.18 of the UTAH2000 Analyzer specifications. Records of all quality assurance activities with respect to the analyzer are automatically recorded in the analyzer's electronic database and evaluated by Utah County I/M auditors on a regular basis. Section 1.7 discusses requirements for assurance that unauthorized access to the I/M database in the analyzer is secure. Attempts to deliberately avoid or defeat analyzer or inspection quality assurance provisions result in disciplinary action against the I/M mechanic and/or station.

Analyzer maintenance Section 1.8 of the UTAH2000 Analyzer specifications describes required services, warranty provisions, and documentation that analyzer manufacturers must provide to customers. It includes ensuring that the analyzer meets the quality assurance specifications at the time of delivery, that routine quarterly preventative maintenance is performed, training on how to use, maintain, and operate the analyzer is provided by the manufacturer, and that if repair of defects can not be made promptly a

temporary analyzer replacement is provided. Service activities are recorded in the analyzer's electronic database. Utah County has conducted a survey of analyzer owners to determine compliance with these provisions. Failure of an analyzer manufacturer to meet quality assurance specifications could result in de-certification of the that manufacturer's product for use in Utah.

Document security Document security was a high priority during the UTAH2000 analyzer design phase. The analyzer tracks the unique certificate numbers and ensures that the certificate printed matches the test number. Missing certificate numbers are stored in the analyzer database for auditor review. The blank certificates are commercially printed on counterfeit-resistant security paper.

Analyzer certification Sound engineering practices were followed during the design and certification of the UTAH2000 analyzer to insure accurate and repeatable inspections under a range of environmental conditions. Manufacturer owner's manuals, operating instructions, and warranty provisions were also reviewed during the certification process. Comprehensive records of the certification process have been maintained.

Analyzer security provisions Utah County's I/M ordinance requires use of a certified and registered UTAH2000 analyzer for official inspections. Inspection records include the analyzer registration number. The ordinances and regulations make it illegal to alter analyzer software or hardware without written approval. Analyzer calibration requirements, maintenance, and warranty provisions are also specified in the Utah County I/M ordinance.

9. Waivers

Waiver rate Utah County will take corrective action as needed to maintain a maximum waiver rate of 5% of the initially failed vehicles or the Utah Air Quality Board will revise the SIP and emission reductions claimed based on the actual waiver rate. The conditions for issuing waivers legally authorized and specified in the Utah County I/M ordinance meets the minimum waiver issuance criteria specified in 40 CFR Subpart S 51.360.

Waiver procedures A waiver document may be issued only by Utah County I/M technical center staff and only after verification of required documentation. Any tampered, missing, or inoperable emission control devices must have been replaced or repaired. At least $100 for 1968 through 1980 model year vehicles, $200 for 1981 through 1995 and $400.00 for 1996 and newer model year vehicles must have been spent on acceptable emission repairs as verified by a Utah County I/M program auditor by physical examination of the vehicle and review of the repair documentation. Repair documentation, such as receipts, are copied and retained by auditor to prevent reuse. Utah County requires that emissions-related repairs be performed by a licensed auto repair business in order to count the labor costs. Any vehicle that experiences an increase in all emissions levels is not eligible for an emissions repair waiver regardless of the

amount spent to repair the vehicle. Also, before a waiver can be issued, the vehicle meet a specific waiver cutpoint. Utah County's waiver policy on emission standards for carbon monoxide can be found in Appendix E of Utah County's Vehicles Emission Inspection/Maintenance Program Ordinance. In the state of Utah, vehicles still under the federal emissions warranty are not eligible for a waiver until all warranties are exhausted. Warranted repair and tampering repair may not be applied to the repair cost waiver limits. Waivers are only valid for one test cycle. The vehicle owner surrenders the original waiver document at the time of registration; copies are not accepted for registration purposes. Specific provisions regarding waivers may be found in Utah County's I/M ordinance and the Utah Tax Commission Division of Motor Vehicle policy manual which is available upon request. The I/M program in Utah County does not provide for time extensions to relieve economic hardships in obtaining emission-related repairs.

10. Motorist compliance enforcement

Registration denial Utah County's I/M program is enforced by means of registration denial. Vehicle owners must present proof of compliance with the I/M program, a waiver, or evidence of exemption from the I/M program as a condition precedent to vehicle registration or registration renewal. See sections 4 and 6 above for a more detailed discussion of inspection frequency, inspection scheduling, license plate requirements, and enforcement of the registration requirements. Citations are routinely issued to operators of vehicles with expired or missing license plates during routine traffic stops, parking lot inspections, and roadblocks. As specified in Section 41-1a-1303 of the Utah Code, driving without registration is a Class C misdemeanor. The penalty for a Class C misdemeanor is imprisonment of no more than 90 days and $750 for persons or up to $1000 for corporations, associations, partnerships, or government instrumentalities. In addition to paying a fine the motorist must register the vehicle. It is currently a Class B misdemeanor to violate a county I/M regulation or ordinance. The penalty for a Class B misdemeanor is a imprisonment of not exceeding six months and for persons a fine of up to $1000 or for corporations, associations, partnerships, or government instrumentalities a fine of up to $5000. In Utah, the magnitude of such penalties is a judicial rather than an administrative decision. Per Section 41-1a-1315 falsification of evidences of title and registration is a second degree felony.

Certificate of Compliance The Certificate of Compliance is dated by the UTAH2000 analyzer in Utah County immediately after a passing inspection is completed. The certificate is only valid for registration purposes for two months. At the same time the analyzer also prints the following information on the certificate to ensure unambiguous vehicle identification: the vehicle identification number (VIN), license number, model year, make, and model. A sample of the Certificate of Compliance is in Appendix C of the UTAH2000 specifications. The certificates are only printed in the event that the vehicle passed the emissions inspection. Separate documentation, including the same vehicle information, is used for waivers.

Fuel changes to non-subject status Vehicle changes that would result in registration changes from a subject to exempt status require physical confirmation by Utah County I/M program personnel at the I/M technical center. Falsification of registration or title information is a felony offense.

Title transfers Proof of compliance with the I/M program is required for a title transfer. The system ensures that owners are not able to avoid the program by extending the inspection date through manipulation of the title and registration system.

Utah County I/M program staff, peace officers, and the Utah Tax Commission Motor Vehicle Customer Service Division routinely work together to ensure that motor vehicle owners that move into an I/M program area complete registration transfer including compliance with the I/M program. Except for higher education students and active duty military personnel, people are required to register their vehicles in the county in which they are domiciled. As discussed in the Vehicle Coverage section, although these two exempted classes of vehicle owners do not have to register their vehicles in Utah, they do have to comply with the I/M programs. Employment status, maintenance of a residence, enrollment of children in local schools, and voting districts are considered when identifying persons in violation of this requirement.

The Utah County I/M program staff work with citizens, the Motor Vehicle Customer Service Division and county attorneys to identify and prosecute people that illegally transfer registration to a non-subject area to avoid the I/M program. The process is very labor intensive. There are many legitimate reasons to be operating a vehicle in an I/M program area that is registered elsewhere. Violators must be dealt with on a case-by-case basis. Persons caught are subject to fines. Those prosecuted and convicted could end up with a criminal record and actual jail time. Fraudulent registration of a motor vehicle is a felony offense. Most people confronted with evidence of their guilt and the seriousness of their offense, to date, have complied promptly. The involved agencies are developing more efficient methods of dealing with illegal registrations that result in exemption from the I/M programs.

Utah County is committed to a cooperative aggressive effort to ensure that vehicles operated in the county comply with the I/M program to ensure a compliance rate of at least 95%.

11. Motorist compliance enforcement program oversight

Utah Tax Commission, tax assessors, and county roles The Utah Tax Commission Motor Vehicle Customer Service Division and county tax assessors deny application for vehicle registration or renewal of registration without submission of a valid certificate of compliance, waiver, or verified evidence of exemption. Proof is retained by the tax clerk, micro-photo-copied, and then destroyed. Altered or hand-written documents are not

accepted. All certificate data is collected by Utah County I/M program auditors and subjected to scrutiny for evidence of any improprieties.

Database quality assurance The vehicle registration database is maintained and quality assured by the Motor Vehicle Customer Service Division. The I/M inspection database is maintained and quality assured by Utah County I/M program staff. See Appendix F of the UTAH2000 analyzer specifications for a file layout description. The Utah County I/M program has access to the Motor Vehicle Customer Service Division database and utilizes it on a regular basis for quality assurance purposes. The databases are subject to regular auditing, cross-referencing, and analysis. The databases are also evaluated using data obtained during roadblocks and parking lot surveys. Evidence of program effectiveness problems trigger additional joint enforcement activities.

Oversight provisions The oversight program includes verification of exempt vehicle status through inspection, data accuracy through automatic and redundant data entry for most data elements, an audit trail for program documentation to ensure control and tracking of enforcement documents, identification and verification of exemption-triggering changes in registration data, and regular audits of I/M inspection records, I/M program databases, and the Motor Vehicle Customer Service Division database.

Enforcement staff quality assurance I/M program auditors and tax clerks involved in vehicle registration are subject to regular performance audits by their supervisors. All enforcement personnel (direct and indirect) involved in the motorist enforcement program are subject to disciplinary action, additional training, and termination for deviation from procedures. Specific provisions are outlined in the Motor Vehicle Customer Service Division procedures manual, the county I/M audit policy documents contained in the Utah County I/M ordinances, and Section 3.9 of the UTAH2000 analyzer specifications.

Co-operative enforcement oversight effort Motor Vehicle Customer Service Division, Utah Division of Air Quality, Utah highway patrol, and Utah County I/M program staff meet as needed to ensure on-going high quality oversight of joint motorist compliance program. EPA audit of this process is authorized if measures to protect tax-payer confidentiality acceptable to Motor Vehicle Customer Service Division are exercised.

12. I/M Program quality assurance

Station/inspector audits Utah County regularly audits all permitted I/M inspectors and stations to ensure compliance with the Utah County I/M ordinance. Particular attention is given to identifying and correcting any fraud or incompetence with respect to vehicle emissions inspections. Compliance with record keeping, document security, analyzer maintenance, and program security requirements are scrutinized. The inspector's skill level is also evaluated during audits. Another major purpose of the audits is to retrain inspectors, as necessary, as soon as problems are identified. Documentation sufficient to support a legal case to suspend or revoke a permit is also collected in the event of serious

and/or repeated violations. Most stations and inspectors are audited every month and all at least quarterly.

Covert audits Utah County, to the extent possible, performs a covert audit of each inspector and station at least once a year. The number of covert audits at least equals the number of permitted inspectors. Covert audits are performed using a variety of vehicles that are representative of the subject fleet that are set to fail across a full range of malfunctions. Suspected problem stations and inspectors are targeted for earlier and more frequent audits. Complaints also trigger additional audits.

Covert performance audits shall include:

> Remote visual observation of inspector performance, which may include the use of aids such as binoculars or video cameras, at least once per year per inspector in high-volume stations (i.e., those performing more than 4000 tests per year);
>
> Site visits at least once per year per number of permitted inspectors (per inspector FTE) using covert vehicles set to fail (this requirement sets a minimum level of activity not a requirement that each inspector be involved in a covert audit); and
>
> For stations that conduct both testing and repairs, at least one covert vehicle visit per station per year including purchase of repairs and subsequent retesting if the vehicle is initially failed for tailpipe emissions.

Electronic audit capabilities The UTAH2000 performs various analyses to identify statistically inconsistent data indicative of problem stations and inspectors. Overt audit records are maintained electronically in the UTAH2000. After overt audits the auditor retrieves the data containing the audit, vehicle inspection, and analyzer service, maintenance, and calibration records dating back to the previous audit. The data from each audit is added to the comprehensive central county I/M database. Further analysis of the central database results in identification of stations and inspectors for which additional audits are performed.

Auditor quality assurance Auditors receive on-the-job training in: the use of the UTAH2000 analyzer; the I/M program regulations; basic air pollution control; basic principles of emissions-related motor vehicle engine repair; emission control systems; evidence gathering; administrative procedures and laws; quality assurance practices; and covert audit procedure. Utah County sends auditors to additional automotive emissions-related training and meetings on a regular basis. Auditor supervisors audit the I/M program auditors by reviewing their documentation and also auditing a number of their stations at least once every year.

Written audit procedures The Utah County I/M program overt and covert audit procedures are contained in the Utah County I/M ordinances. A detailed description of

the audit capabilities of the UTAH2000 analyzer are found in Section 3.9 of the UTAH2000 analyzer specifications.

13. Enforcement against stations and inspectors

General enforcement provisions The Utah County I/M program is responsible for enforcement action against incompetent or dishonest stations and inspectors. The Utah County I/M ordinance includes a penalty schedule. For serious or repeated offenses, auditors are authorized to immediately suspend the station or inspector by locking out their UTAH2000 analyzer(s). The County does not have legal authority to impose direct fines on stations or inspectors, but suspension or revocation of a station permit results in a substantial loss of income that is far in excess of $100 fine suggested by the EPA guidance. Station fee settlements are based on 50% of the expected revenue from I/M testing during the suspension, up to a maximum of $3,000. Fee settlements for the inspectors are $100 for any portion of a 15-day period, up to a maximum of $500. A station permit may be suspended or revoked even if the owner/operator had no direct knowledge of the violation. In the case of incompetence, re-training is required before the permit is restored.

The County revised its penalty schedule to comply with the more stringent specifications included in 40 CFR 51.364; it is found in Appendix D of Utah County Ordinance 1999-28. Inspector suspensions may not be reduced by more than 75 days through a negotiated fee settlement.

Suspension and revocation Suspension or revocation effectively bars an individual from further inspections because the auditor removes the inspector's authorization code from the UTAH2000 analyzer. Evidence of indirect participation in emissions inspections by an individual while suspended or revoked could result in legal action against the station. If the station is suspended or revoked the analyzer is totally locked-out. The analyzers are initialized by an auditor for use at a single permitted station and only by inspectors permitted for that station. A record of the serial numbers of all registered analyzers and their locations is maintained by Utah County.

Enforcement records Utah County keeps comprehensive records on all audit activities, warnings, suspensions, and revocations and report enforcement activity statistics to the EPA and the executive secretary on an annual basis.

14. Data collection

I/M data collection Utah County maintains records regarding inspections, equipment maintenance, and the required quality assurance activities.

Analyzer inspection data The UTAH2000 analyzer creates a detailed record of each emissions inspection performed including, but not limited to the following data, for each

vehicle tested: test record number; inspection station number; inspector number; test system number; date of the test; emission test start time; the time final emission scores are determined; vehicle identification number (VIN); license plate number; test certificate number; gross vehicle weight rating (GVWR); model year, make, and type of vehicle; number of cylinders or engine displacement; transmission type; odometer reading; category of test performed (i.e., initial, first retest, or subsequent retest); fuel type of the vehicle; emission scores for HC, CO, and CO_2 at idle and 2500 RPM; and results (pass/fail/not applicable) for visual inspection of the catalytic convertor, air system, gas cap, evaporative system, and positive crankcase (PCV) valve. The tailpipe emission standards for each type of vehicle is included in a look-up table in the UTAH2000 analyzer. The UTAH2000 analyzer automatically uses appropriate standards for the type of vehicle being tested and makes a pass/fail determination. The inspection data is recorded by the UTAH2000 analyzer during the inspection procedure.

Analyzer quality assurance data Quality assurance data including a detailed history of all calibration (including the concentration values of the calibration gases), service, lockout, and document security events are also recorded and maintained by the UTAH2000 analyzer. Each UTAH2000 record includes, as applicable, station number, mechanic access number, auditor access number, service access number, analyzer serial number, date, and activity time.

Analyzer database specifications The programming criteria for the analyzer database is described in Section 3 of the UTAH2000 analyzer specifications. Appendix A of the UTAH2000 analyzer specifications contains a complete description of the electronic data records. The data containing inspection and quality assurance information is transferred electronically nightly and maintained permanently in the county's central I/M database.

15. Data analysis and reporting

Annual Reports Utah County shall analyze I/M program data and submit annual reports to the U.S. Environmental Protection Agency and the executive secretary upon request. Beginning in July of 1995, Utah County will submit to EPA and the executive secretary an annual report, for January through December of the previous year, which provides statistics on the testing, quality assurance, and enforcement activities of each I/M program. At a minimum the annual reports will include all of the data elements listed 40 CFR Subpart S 51.366.

Biennial Reports Beginning in July of 1996, and biennially thereafter, Utah County shall submit a report to EPA and the executive secretary discussing all changes made in the program design, funding, personnel levels, procedures, regulations, and legal authority. The report will also supply a detailed discussion of the impact of such changes upon the program, any weaknesses or problems discovered in the program over the previous two-year period, the steps that were taken to address those problems, the result of those corrective actions, and any future efforts planned.

Data link Utah County requires all certified station owners to provide a computer data link between their station(s) and the Utah County health department in a manner approved by the health department and consistent with the requirements of 40 CFR 51 Subpart S.

16. Inspector training and permitting

TSD Tab ___: Description of I/M training and testing

Inspector permitting and initial training No person may conduct an official I/M inspection unless they are certified and subsequently permitted. Utah County requires formal training prior to certifying inspectors. Each class includes at least the following information: the causes and effects of air pollution; the purpose, function, and goal of the I/M program; I/M inspection ordinances, policies, and procedures; technical details of the test procedures and the rational for their design; emission control device function, configuration, and maintenance; quality control procedures and their purposes; public relations; and safety and health issues related to the I/M inspection process. Inspector candidates will not be issued a permit unless they have passed a written test with at least 70% correct responses and a hands-on test during which the trainee demonstrates the ability to properly conduct all test procedures, calibrate the UTAH2000 analyzer, properly utilize equipment, and to follow other I/M program requirements. Utah County will take appropriate steps to insure the security of the testing process.

Inspector Training The Utah County I/M ordinance requires an inspector training program, to include both classroom and hands-on training, with provisions for initial and periodic in-service training. Utah County requires in house training for each inspector before the inspector may perform inspections periodic in-service training, over a period established by the health department.

Inspector permit renewal Inspector permits are valid for a period of one year, at which point refresher testing is required prior to permit renewal. An auditor enters the inspector's permit expiration date in the UTAH2000 analyzer(s) that the inspector is authorized to use. Starting 60 days prior to the inspector's permit expiration date the analyzer displays the message "Your mechanic permit expires MM/DD/YY". The analyzer locks-out inspectors that attempt to use the UTAH2000 analyzer after their permit expires and displays the following message. "Your mechanic permit expired (date). You are not authorized to perform any emissions inspections at this time. Please contact your local I/M office." Auditors will not clear the lock-out until the inspector has renewed the permit. Utah County may require evidence of more comprehensive emissions-related automotive training as a prerequisite to inspector permit renewal.

Inspector permit suspension and revocation A determination of inspector incompetence or failure to comply with I/M program requirements may result in suspension or revocation of an inspector's permit prior to the annual expiration date. A permit to

conduct I/M inspections is not a legal right but rather a privilege bestowed by Utah County conditional upon adherence to its I/M program requirements.

Inspector training authority and materials Authority to require mandatory I/M inspector training is established and described in the Utah County I/M ordinances.

17. Public information and consumer protection

General public information The Utah County, along with the Utah Department of Environmental Quality, provides a comprehensive public education and protection program including strategies to educate the public on: Utah's air quality problems; ways that people can reduce emissions; the requirements of state and federal law; the role of motor vehicles in the air quality problem; the need for and benefits of a vehicle emissions inspection program; ways to operate and maintain a vehicle in a low-emission condition; how to find a qualified repair technician; and the requirements of the I/M program. Information is provided via direct response to inquiries for information, reports, classes, pamphlets, fairs, school presentations, workshops, news releases, posters, signs, and public meetings.

County I/M Technical Center Utah County operates an I/M Technical Center staffed with trained auditors and capable of performing emissions tests. A major function of the I/M technical center is to serve as a referee station to resolve conflicts between permitted I/M inspectors, stations, and motorists. Auditors actively protect consumers against fraud and abuse by inspectors, mechanics, and others involved in the I/M program. Complaints made on a confidential basis are investigated and resolved in a manner that conceals the person's identity to ensure protection of whistle blowers. Auditors advise motorists regarding emissions warranty provisions and assist the owners in obtaining warranty-covered repairs for eligible vehicles. Applications for waivers are evaluated by auditors at the I/M technical center and issued only after visual verification that all the requirements for a waiver have been met, including retest of the vehicle. The I/M technical centers also provide motorists with information regarding the I/M program, general air pollution issues, and emissions-related automotive repairs.

Vehicle inspection report A vehicle inspection report (VIR) is printed and provided to the motorist after each vehicle inspection. A description of the VIR is included in the UTAH2000 analyzer specifications.

I/M county co-operative public education tools A variety of pamphlets and radio, television, and newspaper advertisements about automotive air pollution issues are developed and distributed by the Utah County I/M program in cooperation with other I/M counties and the Utah Division of Air Quality.

18. Improving repair effectiveness

High priority Utah County (along with other I/M counties) and the Utah Division of Air Quality staff jointly identified improvement of repair effectiveness as a high priority action item. The Governor's Clean Air Commission also recommended making affordable additional emissions-related training available. Full emission reductions will only be realized if the repair industry is able to competently diagnose and repair emissions-related defects.

Continuing education I/M program managers have worked with Utah's higher education institutions to develop and provide emissions-related automotive technology classes to mechanics. Inspectors are also encouraged to take classes offered by trade organizations, automobile manufacturers, and dealers. The permit renewal tests are difficult enough to make this provision a good incentive. The classes are advertised in the Utah County I/M technical bulletins.

I/M program repair support activities In initiating improved automotive educational opportunities, Utah County works on a day-to-day basis to ensure that repair information is available. I/M stations are required to have available up-to-date relevant automotive diagnostic references and tools as a condition for obtaining a permit. Utah County maintains a hot line to its I/M technical center so that any mechanic can call for technical assistance related to vehicle inspection, diagnosis, and repair. Technical bulletins are regularly mailed to each permitted station with information regarding training schedules, common problems found with particular engine families, and diagnostic tips.

19. I/M SIP implementation

The I/M program ordinances or regulations, policies, procedures, and activities specified this I/M SIP revision have been implemented and shall continue until a maintenance plan without an I/M program is approved by EPA in accordance with Section 175 of the Clean Air Act as amended.

20. On-road Testing

Utah County operates Remote Sensing Device (RSD) units to help quantify I/M program effectiveness and provide additional program flexibility in the event additional emission credits and/or contingency measures are required to meet program objectives.